exchanges and towns and have one switch. And that way, no customer would be more than 18 kilofeet from a central office, in effect. If you only live three miles from a node, that's the same as living three miles from the central office.

So our definition of last mile is really three miles. The first last mile, we think we've got that pretty well covered for -- for DSL. The second and third last miles are where we're waiting for technology, we're hoping, and we're working on that project. We're deploying, next month, a product that is VDSL and ADSL. It will also have dial tone. If the power goes off or the system fails, you'll have lifeline services. It's 8 megabits capable in the ADSL portion for Internet.

And I guess we look at -- to sell the Internet, which we've got -- roughly 50 percent of our customers have Internet. And they all have the same cry. They want it to go faster. So to help that and to sell that, we're going to try to throw in 100 channels of video and some -- some music channels and some pay-per-views and some of those things. It's kind of like putting the porkchop around your kid's neck so the dog will play with it. If we can get the -- some interest in the video and

the dial tone, you know, maybe we can -- maybe we can get more interest in the faster Internet. So we're going to start deploying that next month. And that's going to be our push.

It's really -- it's really exciting to watch the -- the retired 65-plus people in our area that come in to sign up for the Internet. You know, in the very beginning, we started out with the nerds, then the businesses, then the people that were a little apprehensive. Now we've got the people whose kids are buying -- or grandkids are buying them computers. And those people come to our classes, and they're learning about the Internet. And they're so excited about all of the things and all of the information that's at their fingertips. And that's really, really surprised us in a way, but it's -- we think we're really helping the community.

Getting down to schools, it was our opinion that it was downgraded, because we had fiber to all of the schools, and we had an interactive video network in place. Due to the success we had when -- with the REA-RUS loan and the grant that piggybacked that, we were able to put all of that in place. That since has gone away. We had hoped that the band width requirements would go way up from -- from

a T1 in all of the schools and between the schools, but it looks like they're going to drop back to 56K, K through 8 and T1s in high schools.

In one little school -- in fact, it's the one I grew up with. The kids in the -- in the computer lab actually get off of the Wind Network, grab a dial-up, and do some of their work on a regular dial-up account, because it's faster. So I think we need to really work on education.

Education, you know, for our telemed people, it's doctors who aren't willing to give up -- huh? -- who aren't willing to give up fees. We've got to get past that.

We're hopeful that maybe some wireless product down the road will come along, some future wireless product, and will help us with some of those third mile folks. We've established service for the first time in a couple of communities, Gooseberry and Cottonwood. They had no service before we did the last upgrade. So they're tickled to death with not only pods, but they can now T1. We haven't had any takers, but they certainly are pleased with some of the things that they have.

We've gone through a TS lyric (phonetic). We've got our access rates from 17 cents to a cent

and a half. We're providing toll, intra, inter. That's going over very well with our customers, because they still believe that it's a good idea to be able to walk in to get problems resolved.

We're starting door-to-door sales, because the telephone business in general has pretty much ruined telemarketing. It's hard to get people's attention when you call them. They don't -- they automatically shut their ears off.

I agree with -- with everybody that's spoke so far that the cap on USF for really, really rural communities may have to be adjusted.

And depreciation on some of the equipment. We didn't even buy a switch, because there was no way to depreciate it in its lifetime.

Right-of-way. When we're paying the state and some other people more for right-of-way than the cost of the fiber and the plowing, it seems a little out of whack.

We think the future's the Internet. We think access, long distance, all of those things are going to go away. The customers are going to have broadband access, and they'll do everything they need to do. From -- from soup to nuts will happen on the Internet. And there we had it.

Thank you.

COMMISSIONER FURTNEY: Thank you, Randy.

I'd open it up for questions for our panelists.

Do we need to check -- before we start the questions, do we need to check with Montana first and see if Senator Burns is available?

UNIDENTIFIED SPEAKER: Senator Burns has not showed up yet in Montana. We will put a note on the document camera when he arrives.

COMMISSIONER FURTNEY: Thank you.

Commissioner Thompson, you look like you have a question.

COMMISSIONER THOMPSON: Since I have the mike.

These panelists and others earlier today and at the other hearings have suggested that some form of support is going to be necessary to ensure deployment ubiquitously into most rural areas. I'm wondering what --

UNIDENTIFIED SPEAKER: Can you speak up? We can't hear you.

COMMISSIONER THOMPSON: I'm sorry. Mike closer.

Okay. These panelists and those at the other hearings have suggested that we're going to need some support to make sure that these services are deployed ubiquitously into the most rural areas. I'm curious as to how these panelists would define what is truly rural or frontier or, as my colleague Commissioner Rowe suggested, tundra. Where should we draw the line, and what criteria should we apply before a community or a subscriber is eligible for some type of broadband support? Should we look at population per square mile, distance from a central office or from a fiber node? And where should we, as regulators, assign priorities for distribution of that funding?

COMMISSIONER FURTNEY: That sounds like one that each of you can take a shot at. Let's start with Earl.

MR. OWENS: Well, it sounds like you've decided that there is or will be some money there, which is a good sign.

Where is the line drawn? Around western Montana would be my suggestion. I'm not certain. I'm not certain where -- where you have to draw the line. I'm not certain that there should be a line drawn. I think -- I don't mean to be sounding like

the young man standing there pointing out that the king had no clothes on. I think technology is -- is going to provide some solutions. I think if we get in a hurry, though, we may create more problems than we really solve.

I wish I had a better answer or, really, an answer to your question, but I don't. I'm sorry.

MR. DYE: I think we need to look at some of the people that we're serving. The people I was talking about, 27 customers in far northern Wyoming, those people have been served by an analog carrier for the last 20 years, 30 years, I guess. Some of them were still on open wire. And we have done away with that. We've installed digital loop carrier systems. And these people who couldn't even get on the computer before can now get speeds of 26, 28 kilobits. That doesn't sound like a lot, but to them, that's broadband services. I mean, you know, so the more these people use the computer, though, that's not going to be a realistic speed. And we all know that. But the cost to go out and provide service to these people -- when I say that there's 27 people there, they're not together. They're scattered -- these are ranches scattered over 50, 60 miles. So, you know, do we want to go out -- do we

go out and bury fiber or cable to each customer? That's exactly what -- the costs I talked about, that's exactly what it would be.

I do think that there will be other technologies. I talked to a satellite company last week, probably the same one I talked to last year and the year before, that says it's right around the corner. And I hope it is. I think it is. And hopefully it's less expensive.

I don't have a good answer for your question.

MR. THOMPSON: I think the answer has to be based around cost, not so much per subscriber density, because, you know, ten subscribers per square mile in one area may not need any support where ten square -- ten subscribers per square mile in another area may.

When you look at the construction costs, you know, it's not uncommon in, let's say, South Dakota to have a cost of $10,000 per mile when you go out and put in fiber. If you get into some areas like where Silver Star or, you know, Montana -- when you get into the mountain west, where we're at now, a lot of times it's 40- to $45,000 per mile to put in fiber because of the terrain, the rocks, the

environmental issues, mountain passes, things like that. So I think that probably you're supporting -- supporting it due to cost.

Like that example I gave you earlier where it's $22,000 per subscriber for that exchange in Montana. There's just no way, on an economic basis, that that could ever pay. I would imagine once you get above a couple thousand dollars per subscriber, it's kind of hard to make a real good business case. $22,000 per subscriber, your revenue on that line would have to be on the order of about $500 per month just to be able to meet the carrying cost requirements for that line. That's just totally unrealistic.

COMMISSIONER FURTNEY: Ron?

MR. McCUE: Commissioner, how about 25?

COMMISSIONER THOMPSON: 25 what?

MR. McCUE: Pick a number, any number. How about 25?

You know, that is the difficult part that I think you folks are trying to achieve through these series of hearings. And, unfortunately, I don't think there is a magic number, myself. I think if there is going to be sort of a state commissioned FCC series of rules proceedings, that certainly

needs to be one of if not the primary considerations.

Let me suggest to you that I think anything with a density of less than ten subscribers per square mile is probably going to need support just merely because of the construction costs regardless of terrain. But if you want to start talking about demographics and income levels and things like that, I think we're -- we're in for a really big set of problems.

COMMISSIONER FURTNEY: Randy?

MR. LOWE: I think a tool that could be used would be the use of our state statutes, which says that everybody needs to identify their costs. Once that's been done, you know where the costs are. You know where the expensive subscribers are. You know how expensive they're -- those customers are. That -- that work's already been done in some companies. It would seem like that would be a start if those costs were identified down to a serving area. You could certainly look at that and tell the need just from the costs.

COMMISSIONER FURTNEY: Go ahead, Ron.

MR. McCUE: One follow-up comment, Commissioner, if I'm allowed.

If there is such a cost support, I think it ought to be portable. One of the things that the telecommunications firms have not been world renowned for is creating efficiency over a long monopolistic market. And I believe competitive exchanges are really starting to show some tremendous efficiency in competition that the consumer is seeing the benefit of. So if there is a fund, regardless of how rural, I do believe it ought to be portable.

COMMISSIONER ROWE: Can you point to some rural examples of that?

COMMISSIONER FURTNEY: Is that for the last speaker?

COMMISSIONER ROWE: Yeah. Ron. Efficiencies in competitive rural exchanges.

MR. McCUE: Commissioner, any CLEC in the intermountain west, I think that you would see some efficiencies and certainly some streamlining of networks and people looking at alternative methods of providing service that are yet cheaper to customers or, if not cheaper, the same price that offer a broader variety of technological services. If you would like to discuss specific economics, I'd be happy to do so with you but not in front of 100

people.

UNIDENTIFIED SPEAKER: Oh, come on.

COMMISSIONER FURTNEY: I have a question I would like to ask. At least three of you -- and maybe the others have an opinion, as well. But what effect has the 1995 Wyoming Telecommunications Act had on accelerating advanced telecommunications service deployment? Has it had a positive effect, in your opinion? It doesn't seem like neighboring states have taken that step to -- to implement such a -- I guess an aggressive, pro-competitive type of law. And I'd just like to hear if you think it's been beneficial to accelerating deployment or not.

MR. LOWE: From our company's standpoint, I don't think it's -- it's made any changes as far as deployment. I think you can see in my bio that I started out on an eight-party line. And I remember thinking, as a kid, that there must be a better way to do this so we don't have to stand around and wait for our turn. And I think -- I think that's been our company's stand, is to try to improve service. And the telecom '95-'96 acts are just overhead along the way, I think, as far as we're concerned. But we've tried not to fight it.

We've gone along with it and tried to make the best of it that we could, but I don't think it's changed deployment for us.

MR. McCUE: Commissioner, I'd bifurcate my response into two different areas. In our ILEC territory, as you are familiar with, the '96 act had little or nothing to do with our ability to deploy broadband services. It was simply the luck of geography. We serve the rural area outside of Jackson Hole, Wyoming, and the Star Valley area that is growing in between 15 and 16 percent a year. As such, we had to rebuild our entire network, commencing in 1989, to accommodate the growth and just simple demand for service. We had the good fortune of selecting a broadband -- or at least a deployment methodology at that point in time that allowed for broadband deployment at future points. It proved to be a great technology to use.

The second part of my response would be the '96 act was the primary precipitator to allow us to become a CLEC and go into US West's territory and compete with them. We used good judgment and sound economics in deploying a similar kind of network topology in the competitive area. And that -- that act allowed us to do that.

MR. DYE: In 1994, RT was a new company. And we purchased 16 exchanges from US West. And we're still in the process of rebuilding many of those exchanges. Some of them haven't been rebuilt yet. We have converted all of the switches to digital, but there's a lot of loops that have not been converted or upgraded. So we are still in the process of doing that.

What the act has done for us is put a real push on us to -- to upgrade areas so that we can compete. Like I said, we've got customers that are still on analog carriers. It's hard to go out and compete in another exchange when you still need to upgrade your own. So it's made it difficult for us to provide some of the advanced services that we want to and we want to do, but, yet, we're still trying to upgrade the 16 exchanges that we bought. Unfortunately, our exchanges were not all together. They're scattered all over the state. So it's put a push on us to get our upgrades done so that we can move into a competitive situation.

The other problem we face is a lot of our exchanges are served by these microwave systems that are full. I can't compete in those areas, and neither can anybody else. So until we -- until we

rebuild the -- or replace the backbone, there won't be competition to speak of in those areas.

COMMISSIONER FURTNEY: I don't know if Earl or Larry would like to comment, but if you would, I'd be interested in your perspective.

MR. THOMPSON: Yeah. I just want to make one comment on that.

Like we mentioned earlier, you know, there's -- the 65 percent of people that live in the towns are typically the ones -- if competition is going to come, are the ones that the competition comes to. There's very few people that are interested in competing for those 35 percent of the guys that live, you know, beyond three miles from their central office. Usually, those guys are left to the, you know, incumbent, the eligible telecommunication carrier for that area. And those are the tough guys to reach with broadband. And those are the guys that I think are last, if ever, going to experience the wonders of competition.

COMMISSIONER NELSON: Steve, I have a question.

COMMISSIONER FURTNEY: Pam?

COMMISSIONER NELSON: Well, I guess my question is -- I'm kind of confused about where some

of the panelists up here today are on whether or not we need a federal fund or whether or not we don't. So I guess, straight up and down, is there anybody on the panel today that really believes that we're going to have, in a timely manner, deployed advanced and broadband services in rural areas without some kind of federal mechanism?

MR. OWENS: I think the ubiquitous employment of broadband is going to absolutely require some type of federal support. But that's ubiquitous. I think -- I think the carriers that are incumbents and are being pushed by -- by competition, by demand from the -- their Internet customers, will be deploying broadband where it is economical, where a business case can be built for it. But ubiquitous deployment is going to, I believe, require some -- some assistance.

COMMISSIONER NELSON: I think the gentleman better defined my question, because that's the real question I meant to ask.

MR. THOMPSON: When we did that report -- I know Commissioner Nelson's read through this -- for South Dakota, we determined that it was around, you know, half a billion dollars, essentially, to upgrade just the independent

telephone companies. That's not including all the US West exchanges. And our goal -- when we were originally looking into that, we were thinking, well, maybe we could do some sort of a state Universal Service Fund to help support that infrastructure. It turned out it was on the order of, like -- we have about $400 million of total revenue in South Dakota. That includes inter- and intrastate, you know, cellular, everything. And we thought, well, maybe we could do kind of like what -- fund that like the USF on the federal level is funded. And it turns out that the percentage that would be required to be able to draw from even just $400 million in a low densely populated state like South Dakota would be cost prohibitive. It's on the order of, like, 30 percent or more that we would have had to assess on that $400 million just to support that infrastructure.

So I think it would be difficult without any federal assistance in these small rural states to effectively be able to do anything at the state level, to be able to do some sort of broadband deployment in a timely manner.

COMMISSIONER FURTNEY: Frank, do you have a question?

MR. GALEOTOS: Yes, one question. I want to throw a monkey wrench in here.

At some point, the individual customer's ability to pay, especially in rural areas, is going to come up. How can you see us addressing that kind of an issue -- because it comes up in all the other federal -- all the other governmental programs -- without putting too much burden on you that delivers the service in that process?

MR. OWENS: I'll let somebody else answer first.

MR. LOWE: I don't know what the ability to pay is, I guess. I know we've had customers that pull up out front in a brand-new Cadillac. And I know what they cost, but I don't have one. And they complain that, you know, the $35 is too much to pay for telephone service and full access to the Internet. You know, does that mean that's -- that's all they can pay? I don't know. I know that entertainment gets more income than we do, so I don't know. You know, that's always a concern. But if it really is something that's usable to the public and they can get some good out of it and enjoy, they may be willing to pay more than they're letting on for just a dial tone.

MR. NELSON: Steve? I think it's important to remember that the act really talks about reasonable and affordable, not necessarily ability to pay. And I think that's a whole other social issue.

MR. DYE: You know, for us, in some of our areas, what is reasonable when someone lives 50, 60 miles out of town and the cost to give them broadband service? Their cost is going to be $500 a month or more. I don't know. Will they pay that? No. My best guess is, no, they won't. Will I build out there hoping they will? No.

MR. OWENS: To give you an indication on people's willingness to pay, the survey that I referenced earlier, that was done by NTCA in September of last year, asked members what members -- responding telephone companies what members wanted in their rural areas and their rural markets. And 43 percent responded that people were asking for lower prices. And that's lower prices than the 1995 unlimited access for Internet currently available at dial-up. So ability to pay? That's -- that's a hard one.

MR. LOWE: Well, I think if you look back historically, who would have guessed that

people would pay and are paying what health insurance costs today? I mean, no one would have believed ten years ago that it would cost $500 a month to have health insurance for a family. But it's there, and I believe people are paying it. That doesn't mean I think the sky's the limit, but I think we ought to continue to -- to proceed with as much broadband as we can and let the market decide, you know, are they going to pay it.

UNIDENTIFIED SPEAKER: Mr. Chairman? I believe Senator Burns has arrived in Montana.

COMMISSIONER ROWE: Senator Burns, this is Bob Rowe down in Cheyenne. How are you?

SENATOR BURNS: I'm fine. How are you?

COMMISSIONER ROWE: Let me tell you who we have here. We've got a room full of telecom aficionados, providers, and customers. We had Governor Geringer here earlier this morning. We have quite a few Wyoming elected officials. We have state commissioners from South Dakota, Alaska, and Wyoming. And we also have Commissioner Furchtgott-Roth here. In fact, you missed him really make the point that you like to make about universal service just a few minutes ago.

I'd like to tell everyone here a little bit

about Senator Burns, too. He's, as many of you know, a member of the farm team on the Senate Congress Committee. He, when the act was being worked on, said, We need competition and we need universal service. Senator Burns works on every telecom issue from slamming, high cost fund issues, technology deployment. His digital dozen bill is moving through the Congress, I think, faster than anybody thought was possible, all the different parts of the digital dozen bills. And now he's working hard on Internet privacy issues.

Senator Burns is the author of -- the primary author of Section 706. He's really the godfather of this effort. There's a lot of discussion now about whether or not Congress was thinking about the Internet when they passed the Telecommunications Act. Nobody knew how fast or how far this would move. That's what's exciting about it. But there were certainly a few senators, particularly Senator Burns, who were very much thinking about broadband access, thinking about the Internet several years before the act finally passed.

And I'm proud and delighted to introduce him.